Pathogenesis of Leprosy. Ciba Foundation Study Group No. 15 in Honour of Professor V. R. Khanolkar. Edited by G. E. W. Wolstenholme and Maeve O'Connor. 101 pp, with 19 illus. $2.95. Little, Brown & Co., 34 Beacon St, Boston 6, 1963

This book, fifteenth in the series published by the Ciba Foundation, covers the proceedings of a small conference of experts. The Chairman, the late J. A. Doull, points out that there are about 5 to 12 million cases of leprosy in the world today, but in spite of this, relatively little progress has been made toward conquering this disease, among other reasons because leprosy is uncommon in most of those countries that have become leaders in scientific endeavor.

The first paper on experimental aspects of the histopathology of leprosy, by Weddell and co-workers, emphasizes the role of the Schwann cells. Their observations cast doubt on the prevalent opinion that the skin is the only, or even the most usual portal of infection. It seems clear that once they are in the body, *Mycobacterium leprae* must be disseminated primarily via the bloodstream. Convincing evidence of Weddell's hypothesis is found in the fact that American or European medical personnel who take reasonable hygienic precautions seldom, if ever, contract leprosy. Others who adopt the habits of people in countries where the disease is endemic do become infected. The second paper, by Brieger and Allen, on the cytopathology of the Virchow cell, discloses a sequence of events from the phagocytosis of bacilli to the formation of osmiophilic lepra cell inclusions.

A study by Rees and Waters applying the data of experimental murine leprosy to human leprosy was of considerable interest. In both leprosies, bacilli can be readily killed but only slowly disposed of by tissues. These findings explain why it takes several years of treatment for patients to become smear negative, why there is a slow resolution of lesions following treatment, and why certain complications of leprosy, eg, erythema nodosum, may be initiated by dead rather than living bacilli. The paper of Ranadive discussed in detail reasons for believing that *Myco leprae* may have finally been cultivated, but she was careful to point out that if this is true, *Myco leprae* has undergone adaptation. In the final paper Shepard reports his work on growing *Myco leprae* in foot pads of mice, also an important advance.

Each presentation was followed by a vigorous discussion, with considerable difference of opinion expressed. The booklet fulfills its stated aims of summarizing research in the pathogenesis of leprosy and thus supplements such standard texts as Cochrane's *Leprosy in Theory and Practice.*

VINCENT J. DERBES, MD
New Orleans

Hallucinogenic Drugs and Their Psychotherapeutic Use. Edited by Richard Crocket, R. A. Sandison, and Alexander Walk. 191 pp, with illus. $7.50. Charles C Thomas, Springfield, Ill, 1963

Although hallucinogenic drugs have been used for various purposes for centuries, serious medical studies of them began only about one century ago. In more recent years the use of compounds like D-lysergic acid diethylamide (LSD-25), as well as congeners and derivatives, has become the subject of scientific scrutiny. Of major interest to the practicing physician is the value of these compounds either as therapeutic agents or as adjuncts to psychotherapy. While the evaluation of the psychotherapeutic procedure itself is certainly not readily achieved statistically, the psychopharmacologic action of these drugs can be and has been determined by replicable techniques on man. More than 1,000 papers have appeared on the general aspect of the subject since 1943. Previous conferences have tried to integrate results and to clarify the value of these drugs. The present volume covers an extended conference of the Royal Medico-Psychological Association in 1961.

Here are reported the papers and verbatim discussion by a multi-disciplinary group, principally from Holland, Germany, Switzerland, France, and the United Kingdom. The symposium covered essentially LSD, mescaline, psilocybine and phencyclidine hydrochloride, with major emphasis on LSD and its relationship to other hallucinogens.

The dangers of permanent brain damage and psychosis, claimed principally by nonpsychiatrists and the lay press, are contradicted by Dr. Sandison's statement that only one possible case of psychosis appeared in 500 cases treated at Powick, with the rest showing no unfavorable long-term results. In addition, Leuner reports that schizophrenic borderline patients may recover or improve after administration of the drug. Other optimistic reports by members of the conference refute nonpsychiatric reports of damage. The reviewer has seen no case of brain damage or thinking disorder proved to result from LSD.

The data here presented confirm those found in the Macy Foundation volume, namely, that active psychotherapists in the medical field have found LSD of great value as an aid to psychotherapy. The distribution and control of the drug should naturally be confined, as with other potent drugs, to the medical profession. At the present writing, strict limitations have been imposed on its use by the medical profession in the US, whereas persons not medically qualified may use LSD with relative impunity, presumably illegally. The reviewer hopes that this volume will reassure those controlling federal agencies whose fears have hindered many psychiatrists from using these drugs in practicing their profession. The control of investigations of psychotherapeutic practices should revert to psychiatrists. If this is not done, we in the US will once more have to look to the European Continent for advances in the relationship of chemical structure to pharmacological action. This was the state of affairs prior to World War I. Let us not regress to that era.

HAROLD A. ABRAMSON, MD
Amityville, NY

Essays on Nucleic Acid. By Erwin Chargaff. 220 pp. $8. American Elsevier Publishing Co., 52 Vanderbilt Ave, New York 17, 1963

These nine essays are reprints of discourses delivered at various meetings and symposia from 1949 to date. Fairly technical in scope, they recount the author's work on the chemistry of nucleic acids, the discarding of the tetranucleotide hypothesis and the enunciation, in 1949, of the fundamental principle of base pairing. This work is central to the more recent studies of structure, of the nucleic acids as bearers of "information," and of the chemistry of heredity. There is some repetition of material in different essays.

The preface and final two chapters concern matters which are not less of scientific importance for being personal expressions of opinion. It is, of course, well known that those fields where growth is rapid, competition intense, public interest high, and funds unlimited provide a natural arena for the freebooter and, what is worse, the freeloader. Consequently, there emerge big or little "establishments," "power elites," cliques, claques, and dogmas. The author maintains that this has happened in his field and that he is prepared to criticize from within.

In the final chapter, where this becomes explicit, his target is a "Young Molecular Biologist," a sitting duck well supplied with clichés presumably echoing his scientific betters. Then, there are the "synthetic geniuses" and "fake celebrities," who, one infers, are not limited to the field of molecular biology.

The author wonders what is to be done to stem the "avalanche of rubbish" being published. Here the reviewer takes exception. Gresham's law asserts that bad money drives out good, but optimistically, science appears not to conform to it, for even avalanches of rubbish may not be strictly lethal. Less optimistically, this will only remain true if the channels of communication remain unprivileged, and departures from dogma are not throttled.

In this field rumors of impending "breakthroughs" to the "secret of life" have become fairly commonplace. It is important to have a vocal opposition speaking for rational science.

H. R. CATCHPOLE, PHD
Chicago